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June 15, 2005

Mary L. Cottrell, Secretary  
Department of Telecommunications and Energy  
One South Station, 2<sup>nd</sup> Floor  
Boston, MA 02110

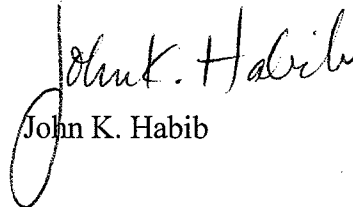
RE: D.T.E. 04-116- Investigation by the Department of Telecommunications and Energy On Its Own Motion Regarding the Service Quality Guidelines Established in Service Quality Standards for Electric Distribution Companies and Local Gas Distribution Companies, D.T.E. 99-84 (2001)

Dear Secretary Cottrell:

Please find attached the responses of Boston Edison Company, Cambridge Electric Light Company, Commonwealth Electric Company, d/b/a NSTAR Electric and NSTAR Gas Company (together with NSTAR Electric, "NSTAR") to information requests DTE-LDC-2-4 and 2-5 asked by the Department of Telecommunications and Energy in its Second Set of Discovery to the Electric Companies in the above-referenced proceeding.

Please contact me, Cheryl Kimball or Kerry Britland at NSTAR if you have any questions regarding the filing.

Very truly yours,

  
John K. Habib

Enclosure

cc: Service List  
Jody Stiefel  
Joseph Rogers, Assistant Attorney General

Information Request DTE-LDC 2-4

Please discuss the feasibility of introducing momentary average interruption frequency index ("MAIFI") as a service quality reporting requirement, phased in over a five-year period such that circuits which are equipped to report MAIFI data are reported in the initial year, with additional circuits added to the annual reporting requirement as they become equipped to report MAIFI data.

Response

NSTAR Electric has no plans to equip its entire distribution system with momentary-outage measurement devices because this type of initiative would involve a significant investment with only minor benefits resulting from that investment. As discussed below, momentary outages are often a sign that distribution-system components are properly performing their functions and guarding against the more significant impacts that can result from contact between the distribution system and external forces such as falling tree limbs, animals or lighting faults. Because momentary outages may actually indicate that the system is working as planned, there is little benefit to the Company in terms of installing expensive equipment to determine exactly where and when these outages occur.

Specifically, momentary outages generally occur when there is a temporary or "transient" fault on a distribution line. Transient faults stem from a number of causes including faulty lighting and momentary contact between a tree limb or an animal and overhead distribution lines. To minimize outage duration and protect distribution equipment in these events, "re-closing" equipment is installed in critical locations on the system. The re-closing equipment is designed to react to fault current by automatically (and momentarily) de-energizing equipment downstream from the fault, which protects that equipment from damage. A "re-closer" type of fault protection will "open" to de-energize the affected line and then will re-close to re-energize the line after a pre-set time has passed. If the transient fault has cleared itself, the line will continue normal operation. If the transient fault is not cleared, the re-closer may open and try to close again (it is programmed to do so) and will remain open if the fault does not clear. Once the re-closer remains open, the attention of an NSTAR technician is needed to return the line to operation, which means that a "sustained outage" will occur.

Although the re-closing action can result in momentary service outages, the end result is that customers experience far fewer sustained outages and, in addition, distribution equipment is protected from damage, *i.e.*, if the momentary interruption did not occur, then a sustained outage would occur. Sustained outages require a service crew to

physically respond to make repairs and restore customer service. Sustained outages could involve a large circuit outage, a line fuse blowing or other equipment damages. In NSTAR Electric's experience, the majority of customers would prefer to experience a momentary outage rather than a sustained outage. Thus, the use of re-closers increases reliability for customers served by the circuit on which the re-closer is installed. Where a customer has a specific concern about the potential for a momentary outage, or there are instances of recurring momentary outages, the Company will work with customers on an individual basis to investigate the specific area and circuit involved and will make improvements as needed to reduce momentary outages in those areas. However, on the whole, momentary outages caused by the operation of re-closing fault protection devices are necessary to maintain the reliability of service to customers (by avoiding sustained outages) and to protect against unnecessary damage to distribution equipment.

NSTAR Electric is currently able to capture momentary circuit interruption data on very limited basis. For example, on some segments of the distribution lines, the Company has installed radio-controlled switches and re-closers that are connected to the SCADA system. On circuit segments with radio-controlled switches and/or re-closers, the operation of a re-closing device will result in the recording of interruption data for use in subsequent analysis and reporting. However, only a few segments of the Company's system are equipped with radio-controlled switches. With non radio-controlled devices, the Company must conduct a field visit to capture the data and record it in a database for use in a performance report to the Department. This is a highly labor-intensive process and is not part of NSTAR Electric's normal work practice because the information does not provide value to the Company in terms of structuring its operations.

As noted above, the Company has no plans to systematically install the equipment necessary to accurately and consistently record momentary outages. NSTAR Electric views the occurrence of momentary outages as a routine event in the normal operation of the distribution system, without which the reliability of service to customers would be substantially impaired. The Company believes that its investment funds are more beneficially directed at system improvements that will improve the reliability of service to customers.

Information Request DTE-LDC 2-5

If the future service quality guidelines were to include conditions for responding to a request for street light repair by customers please explain:

- (a) in detail how your company tracks street light repair requests from the initial street light out call to its repaired status;
- (b) if and how this time period had changed over the last five years;
- (c) the reasons for any changes in the company's response time to repair street lights and the actual time(s); and
- (d) the difference in time to repair an overhead street light compared to an underground street light.

Response

- (a) Reports of streetlight malfunctions are obtained by the Company in a variety of ways, including: (1) calls from individuals (typically NSTAR customers); (2) calls from municipal employees, such as police officers; or (3) field reports from NSTAR line crews, troubleshooters or other employees. Once the Company is notified of a streetlight needing repair, a streetlight repair order is created in either of two systems: (1) the Street Light Application ("SLAP") for the northern territory (Boston Edison Company and Cambridge Electric Light Company); and (2) the Graphical Analysis Tool for Outage Restoration system ("GATOR") in the southern territory (Commonwealth Electric Company). The date of the trouble call is captured in both of these systems. Streetlight repair orders are initiated by Customer Service Representatives in our call center, but can be initiated by operations personnel in the Company's service districts, as well.

The SLAP system was created in 1999 for use by Boston Edison's Community Lighting Department prior to the subsequent sale of many of NSTAR Electric's former streetlighting equipment to municipalities after the enactment of the Electric Restructuring Act of 1997 (the "Act"). Cambridge Electric Light Company streetlighting equipment orders were added to SLAP in 2003 in order to consolidate the process in the northern territory. In the SLAP system, orders are printed out and provided to repair personnel – Lamp Rangers, Troubleshooters, or Underground/Overhead Linemen, on a daily basis. Once the streetlight is repaired, the order is completed within the SLAP system. If

subsequent, additional resources are needed to complete the repair, this additional work is also tracked within the SLAP system.

The GATOR system has been used for streetlighting orders since 2001. In the GATOR system, streetlight repair orders printed out in hard copy by System Dispatchers and provided to Troubleshooters for patrol and repair on a daily basis. The order is completed immediately within the GATOR system, and no further status is captured for the order within the system. The orders are processed daily by Troubleshooters. If a streetlight repair requires additional crew resources, e.g., for a downed post or an underground fault repair, work orders for the repair are created in the Work Management System ("WMS") for scheduling and dispatch to line crews or contractors making repairs to posts, fixtures, conduit, roadways or sidewalks. Once a crew completes the final repair, the completion date is recorded in WMS. However, there is no link between WMS and GATOR to match the information on the original streetlight order with the subsequent WMS repair order.

The Company plans to consolidate all streetlight reporting into the GATOR system and change its processes so that streetlight orders are retained in GATOR until the order has been completed.

- (b) Approximately 5 years ago, Boston Edison Company had a Community Lighting Department, with management and field resources dedicated to improvements in street lighting repairs and replacements. Because of this focused effort, the Company's streetlighting repair performance improved over time. Then, as many communities, including the cities of Boston and Cambridge, began to purchase streetlights from NSTAR after the enactment of the Act, volumes decreased. Streetlight repair work management was decentralized in the Company's Maintenance and Construction departments in each of the Company's 8 service districts. However, over the past several years, through collective bargaining agreements with Local 369, NSTAR has expanded its resource pool of workers to that can be deployed for streetlighting repairs.
- (c) Please see the Company's response to (b) above.
- (d) By way of example, if a street light is malfunctioning due to a burned out lamp or a photovoltaic cell, there is no difference in the time to repair an underground-fed streetlight than an overhead-fed streetlight. However, if there is a cable fault or a damaged conduit causing the problem, underground-streetlight repairs will take longer because specialized resources, such as conduit contractor or

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underground cable installation crews, must be scheduled and deployed. Additionally, street opening permits and police details may be required from the local municipality prior to repairs. Therefore, underground-fed streetlight repairs often are more complex and require additional steps, coordination and resources to complete the final repair work.